Abdominal tergites dark brown, basal sternites paler, in male posterior borders of sternites narrowly darkened, in the female the incisures narrowly yellowed. Male hypopygium with outer dististyle slender, narrowed very gradually to the blackened feebly bidentate tip.

Habitat.—Thailand.

Holotype: ♂, Doi Chom Cheng, at the Lemmon Cabin, 3,000 feet, February 13, 1953 (Deed C. Thurman). *Allotopotype:* ♀, February 16, 1953. *Paratopotype:* ♂, with the allotype.

Limnophila (*Dicranophragma*) *palassoptera* is generally similar to *L.* (*D.*) *distans* Edwards and *L.* (*D.*) *remota* (de Meijere), differing in the body coloration and in details of wing coloration and venation.

A New Oryid Genus and Species from Africa, with Generic Key and Notes on Evolution within the Family Oryidae (Chilopoda: Geophilomorpha) [1]

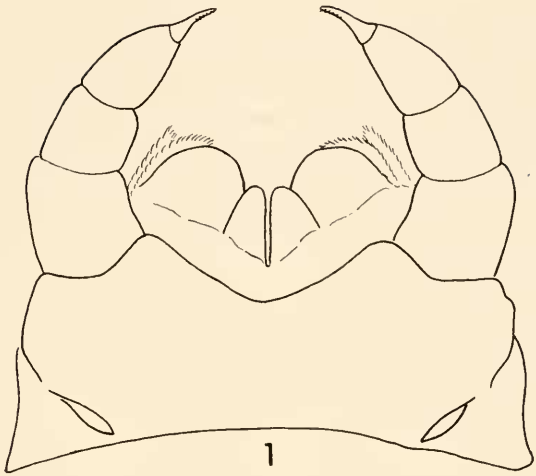
R. E. Crabill, Jr.[2]

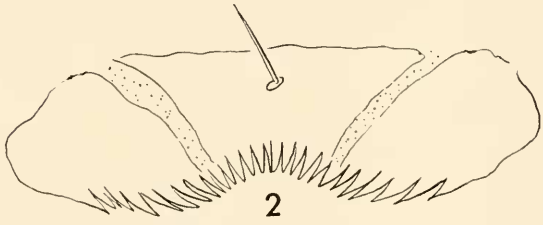
The Oryidae are exclusively pantropical, the great majority occurring abundantly in the New World tropics and in Africa. Elsewhere they are known only in Asia by *Pentorva indica* Silvestri, *Nycternyssa stheno* Crabill, and by *Orphnaeus brevilabiatus* (Newport), a tramp species recorded from the world tropics.

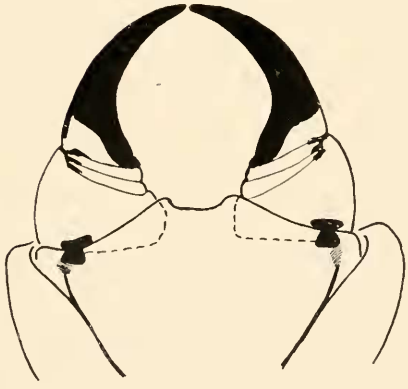
The impact of evolution upon the Oryinae is, I believe, reflected in a number of morphological tendencies, most of which appear to be proceeding in a parallel manner. The ultimate leg's double tarsus in some genera has become single through amalgamation. In all genera the ultimate pedal segment has clearly undergone substantial reduction: this is best seen in the small, glandless coxopleuron. In most genera the second maxillary claw is bihispidate, but in a few the claw, having lost its filaments, is secondarily plain. Some genera are notably polypodal (e.g. *Orya*), whereas others are relatively eurypodal (e.g.

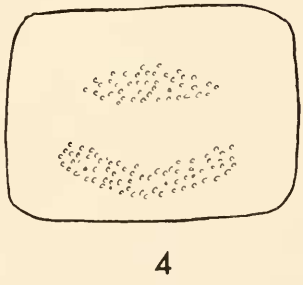
[1] Accepted for publication March 4, 1968.

[2] Smithsonian Institution, U. S. National Museum, Washington, D. C. 20560.









Stenorya vermiculata, holotype: figures 1–4

1. First maxillae, second maxillae; ventral aspect; setae deleted. 2. Labrum. 3. Prehensors and prosternum; ventral aspect; setae deleted. 4. Fifth pedal sternite showing porefields; setae deleted.

Orphnacus). Broelemann regarded the polypodal condition as being antecedent to the eurypodal, but I believe that polypodality must be secondary, eurypodality primary. I suspect that evolutionary selection would tend to favor multi-segmental, many-legged body systems especially in the crevice-cranny and fossorial environments that the oryids have exploited so successfully. Furthermore, comparative morphological evidence without ethological recourse infers evolution to have proceeded in the direction of polypodality.

The genus described here as new reveals some features which I take to be secondary and some which surely seem to be primary. The ultimate leg tarsus is bipartite, clearly the primitive arrangement. The second maxillary claw has lost nearly all (but not all) of its filaments. The tripartite labrum seems derivative (in this family but not necessarily in all families) from the unipartite condition. The ventral pore-fields disclose more reduction in extent, and they seem more circumscribed than those of most other genera, the more dispersed configurations evidently being the primary ones. If paratergites are primitive features, then the new genus has lost them. Among known oryids only the new genus is known to possess prosternal pleurograms, which are, I believe, derivative and not primitive both here and throughout the Geophilomorpha. We are confronted, then, with a familiar potpourri of morphological conditions, some evidently antecedent, some apparently derivative. The impression I gain is that the new genus is more removed from the primitive oryine [3] habitus than are some other genera, yet not so far removed from it as are still others.

Stenorya, NEW GENUS

Stenorya most closely resembles the African *Ctenorya*. In both the ultimate leg has two tarsalia, and the second maxillary claw is bihispidate. Their ultimate pretergites are not medially incised or embayed.

They differ most notably in the following particulars. *Stenorya:* (1) pleurograms present. (2) Second maxillary claw filaments present but evanescent, distally only, few in number. (3) Second maxillary basal article ectally not geniculate. (4)

[3] I stress the Oryinae, for my present thinking tends to view the Trematoryinae as incorporating most of the more primitive features of the family.

Paratergites absent. (5) Ultimate legs about as robust as penults and only very slightly longer. *Ctenorya:* (1) pleurograms absent. (2) Second maxillary claw filaments numerous, present nearly along entire claw length. (3) Second maxillary basal article ectally strongly geniculate. (4) Paratergites present. (5) Ultimate legs very much thinner and notably much longer than the penults.

Type-species: *Stenorya vermiculata*, new species. (By original designation and monotypy.)

Stenorya vermiculata, NEW SPECIES

Holotype: female. Africa: Tanganyika, 2 miles east of Mombo at 55 m; 12 November 1957; E. S. Ross and R. E. Leech, legg. In the collection of the California Academy of Sciences.

General. Length, ca. 75 mm; greatest width, only 0.75 mm. Shape: dorsoventrally greatly depressed, ribbon-like; attenuate at neither end. Vestiture: except for underside of legs, which are sparsely hirsute, virtually glabrous. Leg-pairs, 161.

Antennae. Length to head length, 15:6. Distally gradually attenuate; dorsoventrally strongly flattened. Special setal sensoria: ectally on articles 8 through 14; mesally on articles 13 and 14. Each article, except the 14th, wider than long. *Cephalic plate.* Wider than long, 7:6. Dorsally domed; rear margin straight, sides excurved. Frontal suture absent. *Clypeus.* Clypeal area and plagulae absent; prelabral bigeminate setae present. Full width of anterior third sparsely clothed with short setae. Paraclypeal sutures complete, parallel to longitudinal body axis, meeting clypeus far ectad of labial fulturae. *Labrum.* Vaguely but definitely tripartite, the midpiece nearly as broad as either sidepiece. Armed with strictly hyaline filaments, the whole labrum strongly protuberant. *Mandible.*[4] With the long, notably straight shaft common to all members of the family (new character). Molar edge with an indeterminate number of pectinate lamellae. *First maxillae.* Coxosternum medially undivided and non-suturate; lappets relatively long, attenuate, scabrous. Telopodites: without discernible interarticular sutures; lappets long, robust, apically blunt. *Second*

[4] So minute, fragile, and brittle are the specimen's trophi that I did not detach them. Instead I studied them *in situ*, treating them with clearing agents in a hydrophilic mounting medium.

maxillae. Isthmus anteroposteriorly very deep, areolate, undivided, non-suturate, not narrowly diastemate. Pore in extreme posterolateral position. Telopodite: dorsal and ventral basal condyles present; without denticles; apical claw on distal half with a ventral and a dorsal row of minute filaments. *Prehensor*. Squat, robust; articles 1, 2, and 3 together much shorter than tarsungula. Mesal denticles absent. Tarsungula: presentation is mesal not mesodorsal; basal tooth absent; edges not serrulate; poison calyx subcordiform, not linear. *Prosternum*. Ingressing deeply into trunk, to rear of first somite. Pleurite not intimately fused with epiprosternum; pleuroprosternal sutures thus strongly oblique. Pleurograms digressing from pleuroprosternal sutures and meeting condyles. *Tergites*. Except first and last, each shallowly bisulcate; all virtually glabrous. Paratergites absent. *Stigmopleurite*. Not fused with adjacent pleural elements. All spiracles circular. *Pretarsi*. Each with a prominent basal fundus. Anterior parungues twice longer than posterior parungues. *Sternites*. On anterior third of body much wider than long, thereafter becoming progressively longer than wide. Without fossae, sulci, or *carpophagus*-structures; virtually glabrous. *Ventral porefields*. On anterior third of body: each sternite with an anterior and a posterior transverse and unbroken field as shown. On posterior two-thirds of body; the posterior fields dividing medially into two posterolateral fields which persist through the penult; the anterior fields dividing medially into two, these reuniting on the third from last to form a single subcircular field which persists through the penult. *Ultimate pedal segment*. Pretergite not reduced, not medially incised (new character); separated from its prominent pleurites. Tergite much wider than long (3:2). Presternite medially divided. Sternite much wider than long (5:2). Each coxopleuron relatively small, without glands. Telopodite longer than that of penult (8:6); articles longer than wide; with 2 tarsalia; without pretarsus. *Postpedal segments*. Female gonopods except at extreme base not contiguous, discrete; each comprised of two dissimilar articles. Anal pores absent.

Oryinae: Key to Genera

In the following key to the genera of the world the reader will note the absence of *Incorya* Chamberlin and *Venezuelides* Ver-

hoeff, both of which I take to be junior subjective synonyms of *Titanophilus* Chamberlin (NEW SYNONYMIES).

I have studied first-hand the representatives of all of the genera except *Marshallopus*, in which instance there was no recourse but to consult the literature: Verhoeff, in Bull. Raffles Museum, No. 13, p. 227, 1937.

1 Ultimate leg with one tarsal article....2
Ultimate leg with two tarsal articles....5
2(1). Paratergites absent....**Diphtherogaster**
Paratergites present....3
3(2). Second maxillary claw simple....**Titanophilus**
Second maxillary claw hispidate....4
4(3). Ultimate and penult legs approximately equal in length. Ultimate pretergite laterally partly atrophied and medially wholly suppressed, the entire pretergite concealed....**Pentorya**
Ultimate legs notably shorter than penults. Ultimate pretergite normal....**Notiphilides**
5(1). Second maxillary claw simple....6
Second maxillary clay hispidate....7
6(5). Stigmopleurite fused without suture with adjacent pleurite....**Orya**
Stigmopleurite not fused with adjacent pleurite....**Heniorya**
7(5). Ultimate pretergite posteromedially deeply embayed. Ultimate legs shorter than penults....
....**Aspidopleres**
Posterior margin of ultimate pretergite straight, not embayed. Ultimate either longer or shorter than penults....8
8(7). Paratergites absent. Pleurograms present, reaching condyles....**Stenorya,** new genus
Paratergites present. Pleurograms absent, or if present, then not meeting condyles....9
9(8). Ultimate legs conspicuously long and thin, much longer than penults....**Ctenorya**
Ultimate legs much shorter than penults....10
10(9). Ultimate leg trochanter, prefemur, femur, tibia, and tarsus conspicuously expanded and flattened, ventrally cochlear....**Marshallopus**
Ultimate leg not so appearing....11
11(10). Each female gonopod consisting of two discrete articles....**Orphnaeus**
Each female gonopod consisting of one composite article....**Nycternyssa**